REMARKS

Claims 4, 6, 13, 14, 17, 21-25, 30, 31, 35, 36, 40-42, 44, 61-64, and 69-72 are pending, with claims 17, 21-25, and 61-64 being independent.

Applicants respectfully request withdrawal of the finality of office action mailed on March 25, 2004. The finality of the office action is improper since the amendments made after the previous final rejection were denied entry because they were deemed to raise new issues that would require further consideration and/or search. More specifically, the amendments filed on January 9, 2004 in reply to the final office action of August 11, 2003 were denied entry because "they raise new issues that would require further consideration and/or search (see Note below)." The Note states that "New issues added to claims 17, 21-25 and 61-64." See Advisory Action mailed on February 17, 2004. The amendments of January 9, 2004 were submitted as part of the Request for Continued Examination (RCE) since they were previously denied entry.

MPEP Section 706.07(b) is relied upon by the Examiner to make this current action final. See Final Office Action mailed March 25, 2004, pp. 16-17. However, according to MPEP Section 706.07(b) this is improper.

> "However, it would not be proper to make final a first Office action in a continuing or substitute application where that application contains material which was presented in the earlier application after final rejection or closing of prosecution but was denied entry because (A) new issues were raised that required further consideration and/or search, or (B) the issue of new matter was raised." See MPEP § 706.07(b).

Moreover, Section 706.07(h) VIII makes it clear that a first office action after filing a RCE may be made final only if the conditions set forth in MPEP Section 706.07(b) are met.

> "The action immediately subsequent to the filing of an RCE with a submission and fee under 37 CFR 1.114 may be made final only if the conditions set forth in MPEP § 706.07(b) for making a first action final in a continuing application are met." See MPEP § 706.07(h) VIII.

As discussed above, the conditions set for in MPEP Section 706.07(b) have not been met. Therefore, Applicants respectfully request withdrawal of the finality of the office action mailed on March 25, 2004.

The amendment filed on January 9, 2004 is objected to under 35 U.S.C. § 132 for allegedly introducing new matter in claims 61-64. Applicants have amended claims 61-64 to address this objection and, accordingly, request withdrawal of the objection.

Claims 61-64 and 69-72 stand rejected under 35 U.S.C. § 112, first paragraph, for allegedly failing to comply with the written description requirement. Applicants have amended claims 61-64 to obviate this rejection.

As amended, claim 61 recites a semiconductor device including at least one liquid crystal panel having at least a first side, a second side, a third side, and a fourth side, where the liquid crystal panel includes, among other features, a nonconductive material applied to the first side, the second side, and the third side of the liquid crystal panel. The nonconductive material is not applied to the fourth side of the liquid crystal panel.

Support for this amendment can be found, for example, on at least page 9, lines 18-25 of the specification. "After completion of the sealing, the glass substrates, or the TFT substrate and counter substrate, are cut along the common planes lying in three directions (top side, bottom side, and right side of the display device shown in Fig. 2). Subsequently, a nonconductive or weakly conductive resin is applied to the cut surfaces." See Specification at p. 9, lines 18-25 and Fig. 2. Independent claims 62-64 have been amended in a manner similar to claim 61.

For at least these reasons, applicants respectfully request reconsideration and withdrawal of the § 112, first paragraph of amended claims 61-64, and their respective dependent claims 69-72.

Claims 61-64 and 69-72 stand rejected under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the subject matter. Applicants have amended claims 61-64 to obviate this rejection.

As amended, claim 61 specifically recites that a nonconductive material is applied to the first side, the second side, and the third side of the liquid crystal panel and is not applied to the fourth side of the liquid crystal panel. Claims 62-64 have been amended in a similar manner.

For at least these reasons, applicants respectfully request reconsideration and withdrawal of the § 112, second paragraph rejection of claims 61-64 and their respective dependent claims 69-72.

Claims 4, 6, 13, 14, 17, 21-25, 30, 31, 35, 36, 40-42, 44, 61-64, and 69-72 stand objected to because they recite a first substrate without the recitation of a second substrate. Applicants have amended these claims to address this objection and, accordingly, request withdrawal of the objection to these claims.

Claims 4, 6, 13, 14, 17, 21-25, 30, 31, 35, 36, 40-42, and 44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sawatsubashi et al. (5,148,301). Applicants have amended claims 17 and 21-25 to obviate this rejection.

As amended, independent claim 17 recites an active matrix liquid crystal display that includes, among other features, a sealing material sealing around a liquid crystal material and provided between a TFT substrate and a counter substrate. A driver circuit is provided over the TFT substrate. A control circuit, which includes a control circuit chip sealed in the sealing material, is provided over the TFT substrate for controlling the driver TFT. The specification supports this amendment:

> "Moreover, in the present invention, all necessary circuits including a control circuit for a driver circuit, can be placed between a pair of substrates by partially thinning at least one of [the] TFT and counter substrates. Further, the active matrix liquid crystal display can be reduced in size by sealing these circuits in a liquid crystal material. Also, the reliability can be improved." See Specification at p. 11, lines 5-11 and Fig. 9 (illustrating the control circuit 901 sealed in the sealing material 902).

Applicants request reconsideration and withdrawal of the rejection because Sawatsubashi fails to describe or suggest an active matrix liquid crystal display that includes a control circuit having a control circuit chip sealed in the sealing material, where the control circuit is provided over the TFT substrate for controlling the driver TFT.

Sawatsubashi describes an active matrix liquid crystal display that includes a plurality of pixel TFTs (104) arranged in rows and columns over a substrate (101) and arranged in a matrix. The Office Action argues that driving circuits 112/113 include driver TFTs and the control circuitry for controlling the driver TFTs. Figs. 3 and 4 of Sawatsubashi illustrate that the driving circuits 112/113 are covered by an alignment film 106 that separates the driving circuits 112/113 from the liquid crystal material 109.

Thus, driving circuits 112/113 are not sealed in the liquid crystal material 109, as recited in claim 17. Rather, driving circuits 112/113 are separated from the liquid crystal material 109 by alignment film 106.

Similarly, amended independent claims 21-25 recite, among other features, a control circuit having a control circuit chip sealed in the sealing material, where the control circuit is provided over the TFT substrate for controlling the driver TFT.

For at least these reasons, applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of amended independent claims 17 and 21-25 and their respective dependent claims.

Claims 61-64 and 69-72 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's admitted prior art (APA) in view of Inoue et al. (5,854,664), McClelland et al. (4,695,490), Sasaki et al. (4,494,825), or Kamoi et al. (JP 61029821A). Applicants have amended independent claims 61-64 to obviate this rejection.

As amended, independent claim 61 recites a semiconductor device including at least one liquid crystal panel having at least a first side, a second side, a third side, and a fourth side, where the liquid crystal panel includes, among other features, a nonconductive material applied to the first side, the second side, and the third side of the liquid crystal panel. The nonconductive material is not applied to the fourth side of the liquid crystal panel.

Applicants respectfully request reconsideration and withdrawal of the rejection because APA, Inoue, McClelland, Sasaki, and Kamoi, either alone or in combination, fail to describe or suggest that a nonconductive material is applied to a first side, a second side, and a third side of a liquid crystal panel and is not applied to a fourth side of the liquid crystal panel.

As acknowledged in the Office Action, APA fails to disclose or suggest that a nonconductive material or weakly conductive material is applied to the side edge of the TFT substrate and the side edge of the counter substrate. Moreover, APA fails to disclose or suggest that a nonconductive material is applied to a first side, a second side, and a third side of a liquid crystal panel and is not applied to a fourth side of the liquid crystal panel, as recited in amended claim 61. Inoue, McClelland, Sasaki, and Kamoi fail to remedy APA shortcomings, as none of these references describes or suggests that a nonconductive material is applied to a first side, a second side, and a third side of a liquid crystal panel and is not applied to a fourth side of the liquid crystal panel.

More specifically, Inoue describes a liquid crystal display panel and a method for manufacturing the panel. As part of the manufacturing process, the panel is cut along the peripheral section of the display area, and the unnecessary section of the panel is removed. The cut surface of the substrates is coated using an ultraviolet curing-type resin. See Inoue, col. 9, lines 25-31. Inoue does not describe or suggest that a nonconductive material is applied to a first side, a second side, and a third side of a panel and is not applied to a fourth side of the panel. Rather, Inoue describes that the panel is cut along the peripheral section of the display area and the cut surface is coated, which suggests that all sides of the display area are coated.

McClelland describes a sealant composition to seal the fill port in a liquid crystal display. McClelland does not describe or suggest that a nonconductive material is applied to a first side, a second side, and a third side of a panel and is not applied to a fourth side of the panel. Rather, McClelland describes that a sealant is applied around the periphery of the panel with the exception of about 0.5 inch to provide a fill port for the liquid crystal material, which suggests that all sides of the display area are sealed with the exception of a fill port. See McClelland, col. 4, 57-60. Similarly, Sasaki seems to suggest that a sealant is applied around the periphery of the panel with the exception of a fill port. See Sasaki, Fig. 2 and col. 2, lines 35-48.

Kamoi describes multiple sealing layers 5 and 6. See, Kamoi, Abstract. However, Kamoi does not describe or suggest that a nonconductive material is applied to three sides and not to a fourth side of a pane, as recited in amended claim 61.

Similarly, amended independent claims 62-64 recite a semiconductor device that includes, among other features, a nonconductive material (claim 63) or a weakly conductive material (claims 62 and 64) that is applied to the first side, the second side, and the third side of a panel and is not applied to a fourth side of the panel.

For at least the reasons discussed above, applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of amended claims 61-64 and their respective dependent claims 69-72.

Claims 4, 6, 13, 14, 17, 21-25, 30, 31, 35, 36, 40-42, 44, 61-64, and 69-72 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of Koyama et al. (6,246,454) in view of Inoue, McClelland, Sasaki, or Kamoi. Applicants have amended the independent claims to obviate this rejection.

With respect to amended independent claims 17 and 21-25, the relied-upon claims of Koyama do not recite an active matrix liquid crystal display that includes a control circuit having a control circuit chip sealed in the sealing material, where the control circuit is provided over the TFT substrate for controlling the driver TFT. Thus, claims 17 and 21-25 are patentably distinct over the relied-upon claims of Koyama. Further, neither Inoue, McClelland, Sasaki, nor Kamoi remedies the failure of the claims of Koyama to describe or suggest a control circuit having a control circuit chip sealed in the sealing material.

With respect to amended independent claims 61-64, the relied-upon claims of Koyama do not recite that a nonconductive or a weakly conductive material is applied to a first side, a second side, and a third side of a liquid crystal panel and is not applied to a fourth side of the liquid crystal panel. Thus, claims 61-64 are patentably distinct over the relied-upon claims of Koyama. Further, neither Inoue, McClelland, Sasaki, nor Kamoi remedies the failure of the claims of Koyama to describe or suggest that a nonconductive or a weakly conductive material is applied to a first side, a second side, and a third side of a liquid crystal panel and is not applied to a fourth side of the liquid crystal panel.

For at least these reasons, applicants respectfully request the withdrawal of the double-patenting rejection of claims 17, 21-25, and 61-64, and their respective dependent claims.

Enclosed is a $420.00 check for the 2 month Petition for Extension of Time fee. During the prosecution of this application, please apply any other deficiencies or credits to deposit account 06-1050.

Respectfully submitted,

Date: 8/25/2004

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